Application No. 10/589,824 Amendment dated July 20, 2009

Reply to Office Action of April 20, 2009

AMENDMENTS TO CLAIMS

Docket No.: 5188-0108PUS1

Page 3

1. (Original) A mobile terminal, comprising:

a terminal body;

an antenna connected to a high frequency signal source within the terminal body; and

a grounding means connected to a ground voltage source within the terminal body.

2. (Original) The mobile terminal according to claim 1, wherein the antenna is a

monopole antenna.

3. (Original) The mobile terminal according to claim 1, wherein the grounding means is

exposed to the outside of the terminal body.

4. (Canceled)

5. (Original) The mobile terminal according to claim 1, wherein the grounding means is

embedded within the terminal body.

6. (Original) The mobile terminal according to claim 5, wherein an electro magnetic

interference EMI intercepting metal shield is formed in a space other than a space where the

grounding means is formed in the inside of the terminal body.

7. (Currently Amended) The mobile terminal according to any one of claims 1 to 6, claims

1-3, 5 and 6, wherein the antenna includes:

an antenna coil of which the linear length is 1/4 of the wavelength of the electric wave

and which receives a high frequency signal power from the high frequency signal source.

8. (Original) The mobile terminal according to claim 1, wherein the antenna includes:

a first core; and

Birch, Stewart, Kolasch & Birch, LLP

Application No. 10/589,824 Docket No.: 5188-0108PUS1 Amendment dated July 20, 2009

Reply to Office Action of April 20, 2009

an antenna coil wound on the first core to receive a high frequency signal power from the

Page 4

high frequency signal source.

9. (Original) The mobile terminal according to claim 1, wherein the grounding means

includes:

at least one grounding coil connected to the ground voltage source.

10. (Original) The mobile terminal according to claim 8, wherein the grounding means

includes:

a second core through which a conductive inner core penetrates and of which the surface

is insulated from the conductive inner core, wherein the conductive inner core is electrically

connected to the high frequency signal source and the antenna coil; and

a grounding coil wound on the second core and connected to the ground voltage source.

11. (Original) The mobile terminal according to claim 10, wherein each linear length of

the antenna coil and the grounding coil is 1/4 of the wavelength of the electric wave.

12. (Original) The mobile terminal according to claim 1, wherein the antenna includes:

an antenna coil to receive a high frequency signal power from the high frequency signal

source;

a conductive inner core electrically connected to the high frequency signal source and the

antenna coil;

a core through which a conductive inner core penetrates, of which the surface is insulated

from the conductive inner core, and which has a conductive surface electrically connected to the

ground voltage source; and

at least one grounding coil connected to the ground voltage source through the

conductive surface of the core.

Birch, Stewart, Kolasch & Birch, LLP

Application No. 10/589,824 Amendment dated July 20, 2009

Reply to Office Action of April 20, 2009

13. (Original) The mobile terminal according to claim 12, wherein each linear length of

Docket No.: 5188-0108PUS1

Page 5

the antenna coil and the grounding coil is 1/4 of the wavelength of the electric wave.

14. (Original) An antenna of a mobile terminal, comprising:

a grounding means exposed to the outside of the mobile terminal.

15. (Original) The antenna of a mobile terminal according to claim 14, wherein the

grounding means has a length of 1/4 of a wavelength of an electric wave.

16. (Original) The antenna of a mobile terminal according to claim 14, further

comprising:

a dielectric substance formed between the grounding means and the mobile terminal.

17. (Original) An antenna of a mobile terminal, comprising:

an antenna coil to receive a high frequency signal; and

a grounding means having a length of 1/4 of a wavelength of an electric wave.

18. (Original) The antenna of a mobile terminal according to claim 17, wherein the

grounding means includes:

at least one grounding coil of which the linear length is 1/4 of the wavelength of the

electric wave.

19. (Original) The antenna of a mobile terminal according to claim 17, further

comprising:

a first core on which the antenna coil is wound:

a conductive inner core electrically connected to one end of the antenna coil to receive

the high frequency signal; and

a second core through which the conductive inner core penetrates and of which the

surface is insulated from the conductive inner core, and

Birch, Stewart, Kolasch & Birch, LLP

Docket No.: 5188-0108PUS1

Page 6

Application No. 10/589,824 Amendment dated July 20, 2009 Reply to Office Action of April 20, 2009

wherein the at least one grounding coil is wound on the surface of the second core.

20. (Currently amended) The antenna of a mobile terminal according to claim 18, further comprising:

a conductive inner core electrically connected to one end of the antenna coil to receive the high frequency signal; and

a core through which the conductive conductive inner core penetrates, which remains to be insulated from the conductive inner core and which has a conductive surface connected to the ground voltage source, and

wherein one end of the at least one grounding coil is connected to the surface of the core.

21. (Original) An antenna of a mobile terminal, comprising:

an antenna coil;

a first core on which the antenna coil is wound;

a conductive inner core electrically connected to one end of the antenna coil to supply a high frequency signal to the antenna coil;

a second core through which the conductive inner core penetrates and of which the surface is insulated from the conductive inner core; and

at least one grounding coil wound on the second core to receive a ground voltage.

22. (Original) An antenna of a mobile terminal, comprising:

an antenna coil;

a conductive inner core electrically connected to one end of the antenna coil to supply a high frequency signal to the antenna coil;

a core through which the conductive inner core penetrates;

a grounding surface formed on the surface of the core to receive a ground voltage;

at least one grounding coil connected to the grounding surface, and

wherein one end of the at least one grounding coil is connected to the grounding surface.